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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,900	07/30/2003	Hiroyuki Usami	053588-5019	6249
9629	7590	01/12/2005		
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			EXAMINER GORDON, RAQUEL YVETTE	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1) ☒ Responsive to communication(s) filed on 7/30/2003 (this application).
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) 4-7 is/are allowed.

6) ☒ Claim(s) 1-3, 8 and 10 is/are rejected.

7) ☐ Claim(s) 9 and 11 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

1) ☒ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 7/30/2003.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 8, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamamoto (2003/0058308).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yamamoto teaches every element of the instant claims including:

1. An ink-jet recording head comprising: a substrate (102) ; a first conductive layer (122 on left) provided on the substrate; an insulating layer (106) provided on the first conductive layer (122 on left) ; a second conductive layer (122 on right) formed on the insulting layer (106) and coming into contact with the first conductive layer (122 on left);

and a heat generation layer (120) disposed on the second conductive layer (122 left and 122 on right) and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface (¶ 0058, ln 5);

2. An ink-jet recording head according to claim 1, wherein at least one of said first and second conductive layers is metal which includes, as a principal component, aluminum or aluminum alloy (120, ¶ 0058, ln 11);

3. An ink-jet recording head according to claim 1, wherein said heat generation layer is a TaSiO film (¶ 0058, ln 15, and ¶ 0058);

8. An ink-jet recording cartridge equipped with an ink-jet recording head comprising: a substrate (102); a first conductive layer (122 on left) provided on the substrate (102); an insulating layer (106) provided on the first conductive layer (122 on left); a second conductive layer (122 on right) formed on the insulating layer (106) and coming into contact with the first conductive layer (122 on left); and a heat generation layer (120) disposed on the second conductive layer (122 on right) and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface (120, ¶ 0058, ln 11);

10. An ink-jet recording device equipped with an ink-jet recording cartridge equipped with an ink-jet recording head comprising: a substrate (102); a first conductive layer (122 on left) provided on the substrate (102); an insulating layer (106) provided on the

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first conductive layer (122 on left); a second conductive layer (122 on right) formed on the insulting layer (106) and coming into contact with the first conductive layer (122 on left) ; and a heat generation layer (120) disposed on the second conductive layer and having, on a surface thereof, a self-oxidized protective film as an ink-contact interface (120, ¶ 0058, ln 11).

Allowable Subject Matter

Claims 4-7 are allowed.

Claims 9 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for Indication of Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter.

The following claimed limitations are not found in the prior art of record:

4. An ink-jet recording head comprising: a substrate; a first conductive layer provided on the substrate; an insulating layer provided on the first conductive layer; a second conductive layer formed on the insulating layer and coming into contact with said first conductive layer; and a heat generation layer disposed on said second conductive layer and having, on a surface thereof, a self-oxidized protective film as an ink-contact

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interface, wherein a portion is formed, **which portion alleviates a stepped portion formed by an edge of said second conductive layer and said insulating layer.**

5. An ink-jet recording head according to claim 4, wherein at least one of said first and second conductive layers is metal which includes, as a principal component, aluminum or aluminum alloy.

6. An ink-jet recording head according to claim 4, wherein said heat generation layer is a TaSiO film.

7. An ink-jet recording head according to claim 4, **wherein said step-difference alleviating portion is formed by laminated insulating films comprised of different compositions formed on said second conductive layer.**

9. An ink-jet recording cartridge according to claim 8, wherein, in the inkjet recording head, a portion is formed, which portion alleviates a stepped portion formed by an edge of said second conductive layer and said insulating layer;

11. An ink-jet recording device according to claim 10, wherein, in the ink-jet recording head, a portion is formed, which portion alleviates a stepped portion formed by an edge of said second conductive layer and said insulating layer.

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Contact Information


Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Raquel Y. Gordon, whose telephone number is (571) 272-2145. The Examiner can normally be reached on M Tu Th and F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. A fax number is available upon request.

Any inquiry of a general nature or relating to the status of this application or proceeding may be directed to the Examiner or Supervisor.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raquel Y. Gordon
Primary Examiner
Art Unit 2853
January 7, 2004

**RAQUEL GORDON
PRIMARY EXAMINER**